

## **Epigene International**

**CONSULTING GEOLOGISTS** 

July 16, 1996

Mr. J.W. Silveira J.W. Silveira Company 499 Embarcadero Oakland, CA 94606

Subject:

Quarterly Monitoring Report for Site Located at 2301 East 12th Street, Oakland

The purpose of this report is to provide the results of the site investigations carried out in the second quarter of 1996 at the subject site. The site is located at the southwest corner of the intersection of East 1'th Street and 23rd Avenue in Oakland. The site location is shown on Figure 1.A site plan is presented on Figure 2. The site is presently occpuied by Discount Brakes and Tires.

There are six monitoring wells and one extraction well located on or adjacent to the site. The well locations are shown on Figure 2. Gauging of the depth to groundwater was carried out for each project well on June 13, 1996 prior to any purging of the wells. An electronic probe was used to measure the depth to groundwater from the survey mark on the top of the casing. The probe is calibrated to hundreths of a foot. Several of the wells had significant vapor pressure and up to 2 hours were required for the water levels in the wells to stabilize. The groundwater elevations were calculated and are presented on Figure 3. Groundwater elevation contours are also plotted on Figure 3.

In addition to the contouring, a direction and slope of the gradient was also calculated by a graphical

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solution to a three-point problem based on the groundwater elevations of MW-1, MW-5, AND MW-6. The results of this calculation are plotted on Figure 3. The direction of the gradient is generally consistent with the groundwater elevation contouring and most of the more recent previous calculations.

Groundwater samples were collected on June 13 and 18 from all of the project wells. The wells were purged of approximately five casing volumes prior to sampling by bailing or pumping with apurge pump. Purge water was placed in new 55 gallon drums and left on the site. The samples were collected using a dedicated bailer for each well. The samples were placed in appropriate sample containers provided by the laboratory. After labeling each sample, it was stored in a cooled ice chest and transferred to a State certified laboratory under chain-of-custody control.

The requested analysis for each sample was based on the original Workplan, amendment, and the results of the past quarter sampling and analysis. The results of the water samples are summarized on tables 1 through 7 for each well. The tables also include the results of previous data for each well. In addition, LUFT metals were run for the samples from MW-2, MW-3, AND EW-1. These reults are included in Appendix A.

The certified Laboratory Report and chain-of-custody documentation are included in Appendix A. Significant levels of contamination continue to be present in all of the project wells. Graphs showing concentrations of contamination for each well are presented on Figure 4.

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We appreciate the opportunity to of service to you on this project. Should you have any questions, please contact the undersigned.

RED GEOLOGI

JOHN N. ALT Nº 1136

CERTIFIED ENGINEERING GEOLOGIST

OF CALIFOR

Sincerely,

John N. Alt, CEG No. 1136

Attachments

cc: Mr. Barney Chan, Alameda County Department of Environmental Health

Mr. Robert Shapiro, Esquire

Table 1A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-1

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	TRPH*
7/27/92	360	1800	600	5.1	13	18	ND
11/6/92	670	8000	2400	6.1	41	ND	NA
3/2/93	1100	5600	3800	ND	120	ND	NA
5/26/93	1700	4800	3400	44	140	150	NA
8/27/93	1200	8400	2300	35	180	57	ND
12/23/93	ND	7800	29	16	5.8	26	NA
3/27/94	2600	10,000	2400	84	310	280	NA
6/24/94	1500	9000	2300	44	260	170 🐔	NA
10/16/94	2000	10,000	2100	35	250	140	NA
2/13/95	2500	16,000	3200	110	460	260	NA
6/20/95	3500	18,000	2600	87	450	220	NA
10/16/95	2700	13,000	2200	63	220	110	NA
2/15/96	16,000	11,000	1400	25	130	81	NA
6/18/96	8000	12,000	2500	72	190	130	NA
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MW-1 is a 2 inch PVC well installed 12/23/91 to a total depth of 28 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

Table 1B-Summary of Volatile Halocarbon Concentrations (in PPB) Detected in MW-1

Sampling Date	Chloro- henzene	Chloro- ethane	1.2-Di Chloro ethane	Cis 1,2 Dichlore- ethene	Trans 1,2 Dichloro- ethene	PCE	ICE	Vinvi Chloride
7/27/92	NA	NA	NA	NA	NA	NA	NA	NA
11/6/92	NA	NA	NA	NA	NA	NA	NA	NA
3/2/93	ND	ND	ND	ND	ND	ND	5.8	ND
5/26/93	ND	ND	ND	ND	ND	ND	6.8	ND
8/27/93	ND	ND	ND	1.1	ND	5.4	ND	ND
12/23/94	NA	NA	NA	NA	NA	NA	NA	NA
3/27/94	NA	NA	NA	NA	NA	NA	NA	NA
6/24/94	NA	NA	NA	NA	NA	NA	NA	NA
10/16/94	NA	NA	NA	NA	NA	NA	NA	NA
2/13/95	ND	ND	ND	1.3	ND	ND	ND	ND
6/20/95	ND	1.1	ND	1.1	ND	ND	6.5	ND
10/16/95	ND	ND	ND	0.84	ND	ND	2.5	ND
2/15/96	ND	ND	ND	0.82	ND	ND	24	ND
6/18/96	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 0.5 PPB.

Table 2A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-2

Sampling Date	TPH Diesel	TPH Gasoline	Всихене	Toluene	Ethyl- bonzene	Xylenes	TRPH*
7/27/92	1500	20,000	110	6	37	39	ND
11/6/92	17,000	19,000	2800	120	790	1100	NA
3/2/93	37,000	14,000	3800	110	950	1100	NA
5/26/93	6000	11,000	5200	140	1000	990	32
8/27/93	5400	16,000	1700	120	640	710	ND
12/23/93	720	18,000	87	79	42	400	NA
3/27/94	6100	17,000	2100	100	630	750	ND
6/24/94	3000	15,000	2000	72	550	520	7.9
10/16/94	5300	15,000	1500	81	410	520	13
2/13/95	4900	18,000	2000	120	660	900	20
6/20/95	6600	30,000	1300	85	510	520	11
10/16/95	31,000	19,000	1500	92	400	330	11
2/15/96	11,000	25,000	1700	93	490	440	20
6/13/96	5500	13,000	1400	75	460	410	10

MW-2 is a 2 inch PVC well installed 7/8/92 to a total depth of 19 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

Table 2B-Summary of Volatile Halocarbons Concentrations (in PPB) Detected in MW-2

Sampling Date	Cliuru- benzene	Chiore- ethane	1.2.18 Chlore- effiane	Cis 1.2 Dichloro- efficae	Trans 1,2 Bichlero- efficie	PCR	TCE	Vinyl Chioride
7/27/92	NA	NA	NA	NA	NA	NA	NA	NA
11/6/92	NA	NA	NA	NA	NA	NA	NA	NA
3/2/93	ND	ND	ND	ND	ND	ND	ND	ND
5/26/93	9.8	ND	ND	2.7	2.7	ND	ND	ND
8/27/93	10	1.3	0.66	3.2	ND	ND	ND	2.2
12/23/93	4.3	ND	ND	1.0	ND	ND	ND	1.5
3/27/94	ND	ND	ND	ND	ND	ND	ND	ND
6/24/94	6.5	ND	ND	ND	ND	ND	ND	ND
10/16/94	5.7	1.1	ND	0.73	ND	ND	ND	1.0
2/13/95	12	ND	ND	ND	ND	ND	ND	ND
6/20/95	7.9	1.5	1.4	1.0	ND	ND	ND	2.1
10/16/95	5.1	ND	ND	ND	ND	ND	ND	ND
2/15/96	4.8	ND	ND	ND	ND	ND	ND	ND
6/13/96	5.6	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5

NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 2.5 PPB for this well.

Table 3A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-3

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Tuluene	Ethyl- banzene	Xylenes	TRPH*
7/27/92	4000	8800	150	8.6	88	13	ND
11/6/92	21,000	10,000	78	3.1	830	13	NA
3/2/93	9300	3900	120	ND	240	37	NA
5/26/93	4400	7400	570	4.1	640	8.4	ND
8/27/93	8200	7100	180	15	110	9.4	ND
12/23/93	230	7900	30	14	12	62	NA
3/27/94	4300	5700	180	10	100	24	ND
6/24/94	1500	8400	230	13	93	7.6	NA
10/16/94	2700	6300	140	8.7	68	25	7.3
2/13/95	1600	7500	220	17	110	22	8.3
6/20/95	13,000	11,000	310	23	160	63	8.5
10/16/95	1900	4700	120	6.7	32	16	8.3
2/15/96	9400	8100	62	13	50	33	12
6/13/96	5000	30,000	110	65	130	160	51
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MW-3 is a 2 inch PVC well installed 7/8/92 to a total depth of 19 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

Table 3B-Summary of Volatile Halocarbons Concentrations (in PPB) Detected in MW-3

Sampling Date	Chiero- benvene	Cldore ethnie	1,2-Di Chioro- effiane	Cis 1.2 Dichloro- éflicae	Trans 1,2 Dichlero- efficae	PCE	TCE	Vinyl Chlaride
7/27/92	NA	NA	NA	NA	NA	NA	NA	NA
11/6/92	NA	NA	NA	NA	NA	NA	NA	NA
3/2/93	ND	ND	ND	ND	ND	ND	ND	ND
5/26/93	NA	NA	NA	NA	NA	NA	NA	NA
8/27/93	ND	ND	ND	ND	ND	ND	16	ND
12/23/93	NA	NA	NA	NA	NA	NA	NA	NA
3/27/94	ND	ND	ND	ND	ND	ND	6	ND
6/24/94	ND	ND	ND	6.0	1.5	ND	ND	ND
10/16/94	ND	ND	ND	8.4	2.1	ND	12	ND
2/13/95	ND	ND	ND	4.3	1.3	ND	5.1	ND
6/20/95	ND	0.5	ND	4.9	1.7	ND	5.7	ND
10/16/95	ND	ND	ND	7.1	2.0	ND	7.8	ND
2/15/96	ND	ND	ND	7.3	2.6	ND	9.3	ND
6/13/96	ND<1	ND<1	ND<1	6.9	2.5	ND<1	ND<1	ND<1
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 0.5 PPB.

Table 4A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-4

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	TRPH*
3/27/94	1800	2200	19	1.2	2.9	12	NA
6/24/94	420	2300	2.9	1,6	2.8	4.6	NA
10/16/94	900	3500	3.8	2	5.2	24	NA
2/13/95	630	2600	100	100	3.8	7.1	NA
6/20/95	1100	3000	31	3.4	6.1	12	NA
10/16/95	1100	2000	43	2.3	8.4	6.9	NA
2/15/96	940	3400	ND	ND	ND	ND	NA
6/13/96	1100	1900	12	5.7	3.4	9.6	NA
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MW-4 is a 2 inch PVC well installed 3/18/94 to a total depth of 20 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

Table 4B-Summary of Volatile Halocarbons Concentrations (in PPB) Detected in MW-4

Sampling Date	Chloro- benzene	Chioro- ethane	1.2-18 Chioro- ethane	Cis 1,2 Dichloro ethene	Trans 1.2 Dichloro- ethene	PCE	TCE	Vintl Chloride
3/27/94	NA	NA	NA	NA	NA	NA	NA	NA
6/24/94	NA	NA	NA	NA	NA	NA	NA	NA
10/16/94	ND	ND	0.67	0.71	ND	ND	ND	ND
2/13/95	ND	ND	ND	ND	ND	ND	ND	ND
6/20/95	ND	ND	ND	2.2	1.0	ND	ND	ND
10/16/95	ND	ND	ND	1.3	ND	ND	ND	ND
2/15/96	ND	ND	ND	1,8	0.79	ND	ND	ND
6/13/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND< 0.5	ND<0 .5
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 0.5 PPB.

Table 5A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-5

Sampling Date	TPH Diesol	TPH Gasoline	Benzone	Toluene	Ethyl- bonzene	Xylenes	TRPH*
3/27/94	870	2900	71	ND	27	15	NA
6/24/94	950	6100	220	12	38	24	NA
10/16/94	1100	4300	120	5.1	27	13	NA
2/13/95	1200	4600	130	7.9	38	29	NA
6/20/95	1000	6000	140	6.7	27	29	NA
10/16/95	940	2000	43	2.3	8.4	6.9	NA
2/15/96	2200	4400	61	5.3	34	ND	NA
6/18/96	NA	7400	94	11	32	40	NA

MW-5 is a 2 inch PVC well installed 3/17/94 to a total depth of 20 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

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Table 5B-Summary of Volatile Haolcarbons Concentrations (in PPB) Detected in MW-5

Sampling Date	Chloro- benzene	Chloru- ethane	1.2-18 Chloro- ethane	Cis 1.2 Diction orthene	Trans 1,2 Dichloro- efficue	PCB	TCF	Vinyi Chloride
3/27/94	NA	NA	NA	NA	NA	NA	NA	NA
6/24/94	0.53	ND	ND	11	3,1	ND	ND	7.5
10/16/94	0.66	ND	ND	16	4.2	ND	ND	9.6
2/13/95	ND	ND	ND	20	5.1	ND	ND	8.4
6/20/95	0.95	ND	ND	12	4.1	ND	ND	10
10/16/95	0.54	ND	ND	9.8	2.9	ND	2.0	7.6
2/15/96	0.57	ND	ND	7.7	ND	ND	ND	5.3
6/18/96	ND<2.5	ND<2.5	ND<2.5	2.9	ND<2,5	ND<2.5	ND<2.5	ND<2.5
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 0.5 PPB.

Table 6A-Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-6

Sampling Date	TPH Diesel	TPH Gasoline	Benzone	Toluene	Ethyl- benzene	Xylenes	TRPH*
3/27/94	1000	5000	1100	17	180	41	NA
6/24/94	660	8000	1200	21	210	54	NA
10/16/94	850	6300	870	14	140	49	NA
2/13/95	1000	5500	1000	17	210	55	NA
6/20/95	1400	9100	1300	24	240	79	NA
10/16/95	770	3000	590	8.8	84	24	2.8
2/15/96	1500	3900	460	11	110	23	NA
6/13/96	1300	4800	630	14	140	37	4.1

MW-6 is a 2 inch PVC well installed 3/17/94 to a total depth of 20 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

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Table 6B-Summary of Volatile Halocarbons Concentrations (in PPB) Detected in MW-6

Sampling Date	C'hluro- benzene	Chtoro- ethane	1,2-DI Chiore- ethane	Civ 1,2 Dichlora ethene	Trans 1,2 Dichtoro- ethene	PCE	TCE	Vingl Chioride
3/27/94	NA	NA	NA	NA	NA	NA	NA	NA
6/24/94	NA	NA	NA.	NA	NA	NA	NA	NA
10/16/94	NA	NA	NA	NA	NA	NA	NA	NA
2/13/95	ND	ND	ND	40	13	ND	99	87
6/20/95	ND	ND	ND	26	17	ND	29	130
10/16/95	ND<5	ND<5	ND<5	75	16	ND<5	110	54
2/15/96	ND	ND	ND	110	25	ND	160	46
6/13/96	ND<2	ND<2	ND<2	72	20	ND<2	83	33
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 2.5 PPB for this well.

Table 7A-Summary of Hydrocarbon Concentrations (in PPB) Detected in EW-1

Sampling Date	TPH Diesol	TPH Gasoline	Benzone	Toluene	Ethyl- bonzene	Xylenes	TRPH*
3/27/94	920	1200	270	6.2	30	13	ND
6/24/94	1200	4600	410	5.6	78	22	NA
10/16/94	1200	4900	310	5.2	30	32	6.4
2/13/95	1000	3900	380	5.9	41	22	ND
6/20/95	1800	7800	710	14	260	52	6.5
10/16/95	940	3200	310	3.3	32	16	5.5
2/15/96	2400	5000	270	7.5	50	20	4.2
6/13/96	1800	5700	450	11	75	19	8.3
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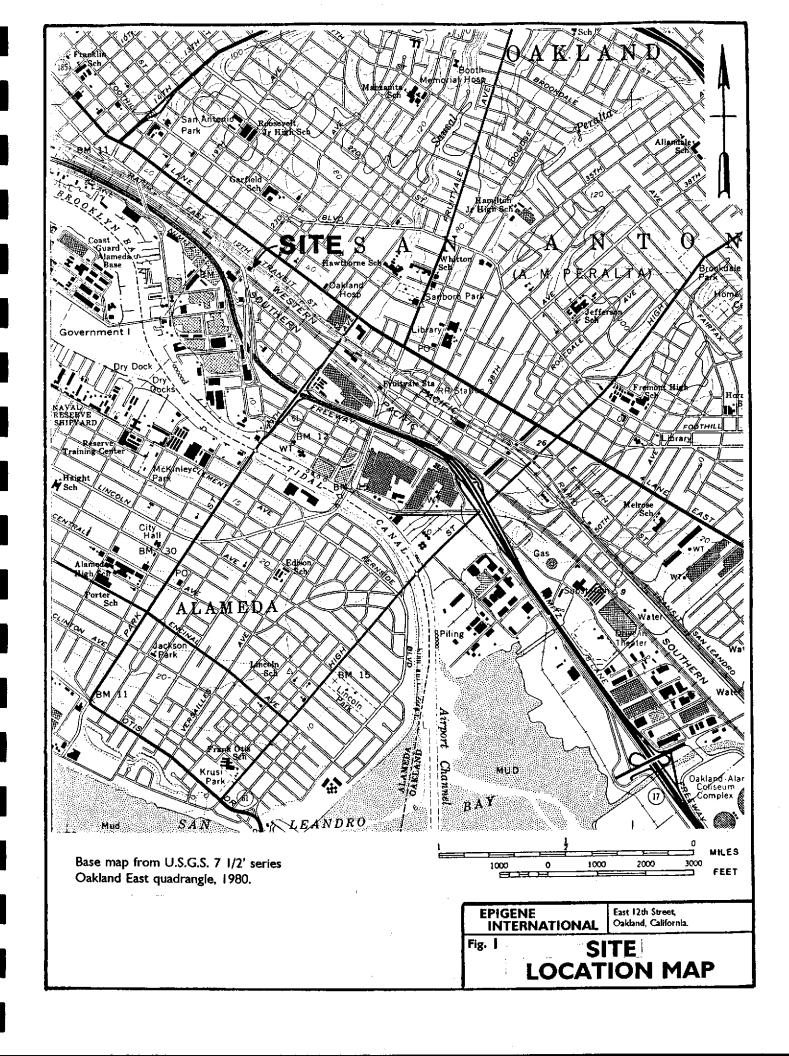
EW-1 is a 4 inch PVC well installed 3/16/94 to a total depth of 30 feet.

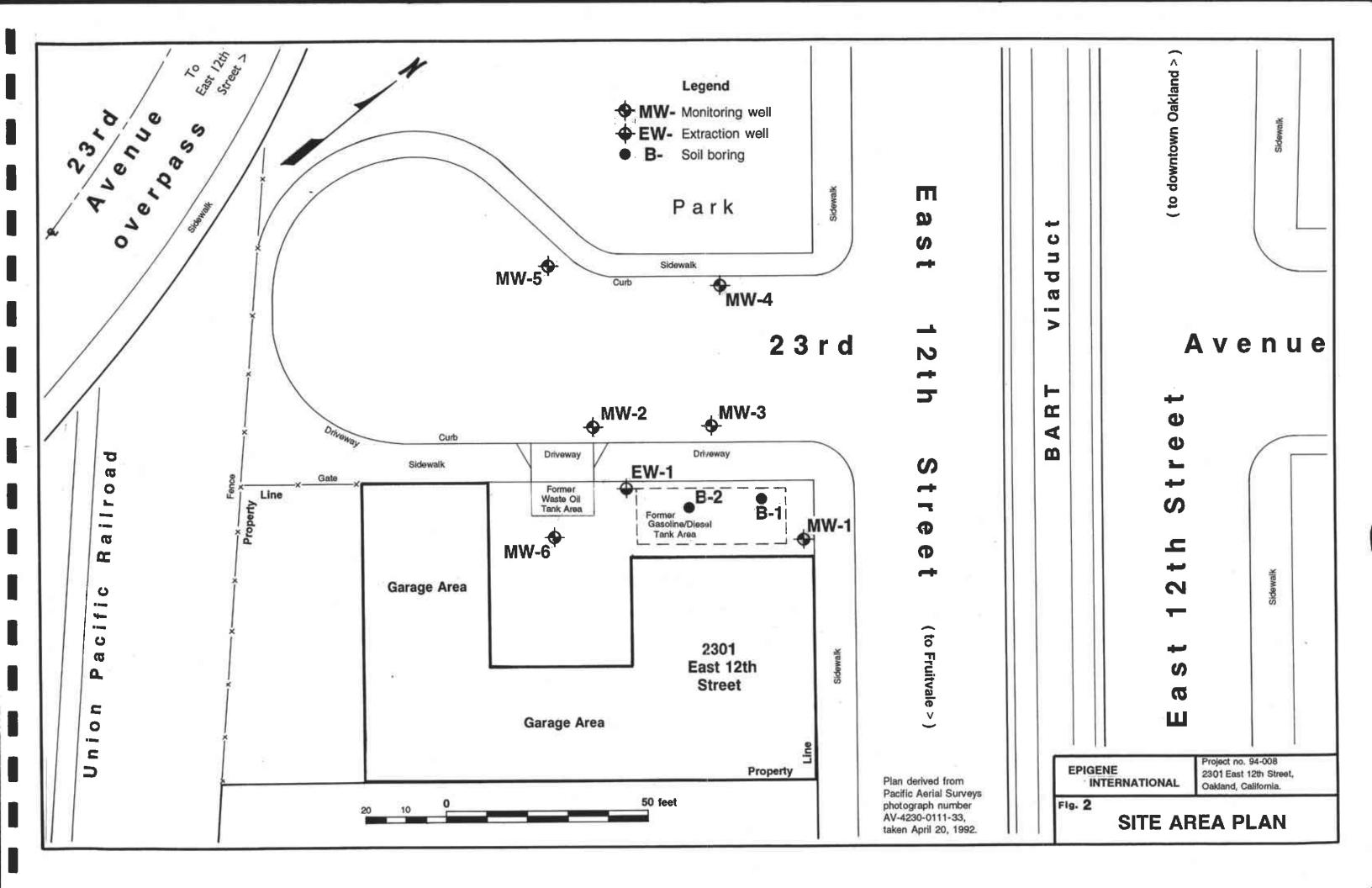
NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; \*TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

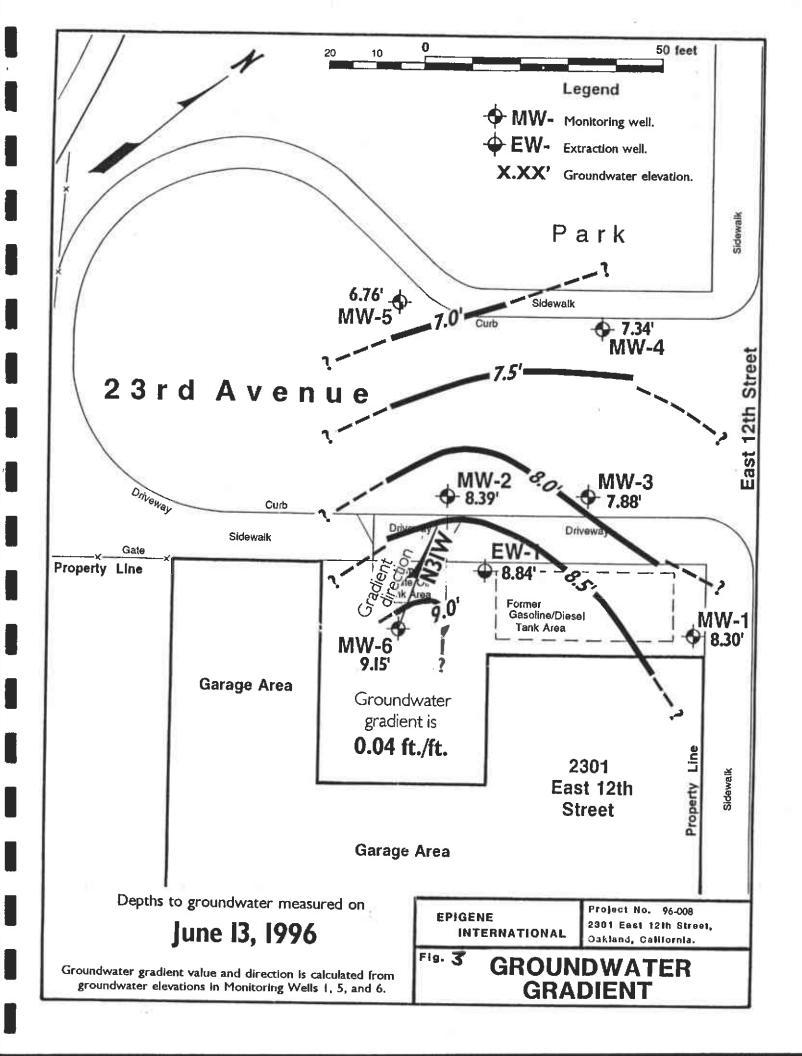
Table 7B-Summary of Volatile Halocarbons Concentrations (in PPB) Detected in EW-1

Sampling Date	Chloro- benzene	Chiore- ethane	12-Di Chloro etione	Cls 1,2 Dichlore eliene	Trans 1,2 Dichlaro etheno	PCE	ICE	Vinyl Chloride
3/27/94	ND	ND	ND	ND	ND	ND	40	ND
6/24/94	ND	ND	1.3	42	11	ND	68	3.2
10/16/94	ND	ND	ND	36	ND	ND	74	ND
2/13/95	ND	ND	ND	13	4.4	ND	53	ND
6/20/95	ND	2.0	ND	4.3	2.0	ND	6.0	2.8
10/16/95	ND <2.0	ND <2.0	ND <2.0	24	7.1	ND <2.0	46	ND <2.0
2/15/96	ND	1.0	ND	17	6.4	ND	33	2.3
6/13/96	ND<1	ND<1	ND<1	25	9.8	ND<1	38	4.9
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NOTE: Table presents only those compounds that have been detected in any of the site wells; data from EPA Method either 8010 or 8240; NA is not analyzed; ND is not detected above detection limits which are typically 2.0 PPB for this well.







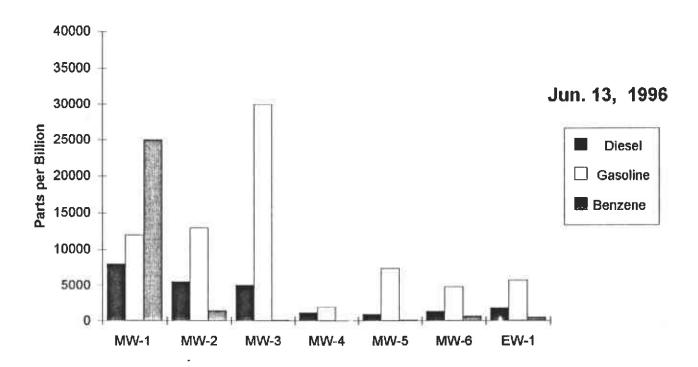


Fig. 4

# APPENDIX A

## **CERTIFIED LABORATORY REPORT**

06/26/96

Dear John:

Enclosed are:

- 1). the results of 5 samples from your 2301 E. 12th Street, Oakland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

Epigene Inter	national	Client I	Project ID:	2301 E. 1	2th Street	Date Samp	oled: 06/13/	96	
38750 Paseo P	Padre Pkwy, # A-11	Oakiano	1			Date Rece	ived: 06/17	/96	
Fremont, CA	94536	Client C	Contact: John	Alt		Date Extracted: 06/17-06/21/96			
		Client P	'.O:			Date Anal	yzed: 06/17	'-06/21/96	
EPA methods 50	Gasoline Range 30, modified 8015, and 80								
Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate	
65994	EW-1	W	5700,a	450	11	75	19	101	
65995	MW-2	W	13,000,a	1400	75	460	410	104	
65996	MW-3	W	30,000,j,h	110	65	130	160	111#	
65997	MW-4	W	1900,j	12	5.7	3.4	9.6	107	
65998	MW-6	w	4800,a	630	14	140	37	108	
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Reporting L	imit unless other- ND means not de-	W	50 ug/L	0.5	0.5	0.5	0.5		
tected above	the reporting limit	S	1.0 mg/kg	0.005	0.005	0.005	0.005		

<sup>\*</sup> water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

Epigene Inte	ernational		oject ID: 2301 E. 12th Street,	Date Sampled: 06/13/96		
38750 Paseo	Padre Pkwy, # A-11	Oakland		Date Received:	06/17/96	
Fremont, CA	A 94536	Client Con	tact: John Alt	Date Extracted:	06/19/96	
		Client P.O		Date Analyzed: 06/19/96		
EPA methods n	Diesel Ran nodified 8015, and 3550 or	n <b>ge (C10-C2</b> 3510; Californi	3) Extractable Hydrocarbons as a RWQCB (SF Bay Region) method GC	<b>Diesel *</b> FID(3550) or GCFIL	0(3510)	
Lab ID	Client ID	Matrix	TPH(d) <sup>+</sup>		% Recovery Surrogate	
65994	EW-1	w	1800,d,a		101	
65995	MW-2	w	5500,d,a		105	
65996	MW-3	w	5000,d,b ,h		101	
65997	MW-4	w	1100,d		101	
65998	MW-6	w	1300,d		99	
	·					
<del></del>						
· · · · · · · · · · · · · · · · · · ·	•					
Reporting	Limit unless other-	w	50 ug/L			
tected abov	e the reporting limit	S	1.0 mg/kg			
		<del></del>				

<sup>\*</sup> water samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP and STLC extracts in mg/L

fulttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

Epigene International	Client Pr	oject ID: 2301 E. 12th Street,	Date Sampled: 06/13/96				
38750 Paseo P	adre Pkwy, # A-11	Oakland		Date Received	1: 06/17/96		
Fremont, CA	94536	Client Cor	ntact: John Alt	Date Extracted: 06/20/96			
		Client P.C	);	Date Analyzed: 06/20/96			
	rable Petroleum Hyd		as Oil & Grease (with Silica Gel- trometry*	Clean-up) by S	canning IR Spec-		
Lab ID	Client ID	Matrix	TRPH <sup>+</sup>		% Recovery Surrogate		
65994	EW-I	W	8.3		NA		
65995	MW-2	W	10		NA		
65996	MW-3	w	51,h		NA		
65998	MW-6	W	4.1		NA		
	_						
Reporting L	imit unless other- ND means not de-	w	1.0 mg/L		····································		
tected above	the reporting limit	s	10 mg/kg				

<sup>\*</sup> water samples are reported in mg/L and soils and sludges in mg/kg

<sup>#</sup> surrogate diluted out of range or not applicable to this sample

At the laboratory's discretion, one positive sample may be run by direct injection chromatography with FID detection. The following comments pertain to this GC result: a) gasoline-range compounds (C6-C12) are present; b) diesel range compounds (C10-C23) are present; c) oil-range compounds (> C18) are present; d) other patterned solvent (?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?) are the source of IR absorption; h) a lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

Epigene International		ID: 2301 E. 12th	Street, Date Sample	ed: 06/13/96		
38750 Paseo Padre Pkwy, # A-11	Oakland		Date Receiv	ed: 06/17/96		
Fremont, CA 94536	Client Contact:	John Alt	Date Extrac	Date Extracted: 06/17-06/21/96  Date Analyzed: 06/17-06/21/96		
	Client P.O:		Date Analyz			
	Volati	ile Halocarbons				
EPA method 601 or 8010		65005	65006	65007		
Lab ID	65994	65995	65996	65997		
Client ID	EW-1	MW-2	MW-3	MW-4		
<u>Matrix</u>	<u> </u>	W	W	l W		
Compound		Concen				
Bromodichloromethane	ND< 1	ND< 5	ND< 1	ND		
Bromoform	ND< 1	ND< 5	ND< 1	ND		
Bromomethane	ND< 1	ND< 5	ND< 1	ND		
Carbon Tetrachloride	ND< 1	ND< 5	ND< 1	ND		
Chlorobenzene	ND< 1	5.6	ND< 1	ND		
Chloroethane	ND< 1	ND< 5	ND< 1	ND		
2-Chloroethyl Viny I Ether (d)	ND< 1	ND< 5	ND< 1	ND		
Chloroform (e)	ND< 1	ND< 5	ND< 1	ND		
Chloromethane	ND< 1	ND< 5	ND< 1	ND		
Dibromochloromethane	ND< 1	ND< 5	ND< 1	ND		
1,2-Dichlorobenzene	ND< 1	ND< 5	ND< 1	ND		
1,3-Dichlorobenzene	ND< 1	ND< 5	ND< 1	ND		
1,4-Dichlorobenzene	ND< 1	ND< 5	ND< 1	ND		
Dichlorodifluoromethane	ND< I	ND< 5	ND< 1	ND		
1,1-Dichloroethane	ND< 1	ND< 5	ND< 1	ND		
1,2-Dichloroethane	ND< I	ND< 5	ND< 1	ND		
1,1-Dichloroethene	ND< 1	ND< 5	ND< 1	ND		
cis 1,2-Dichloroethene	25	ND< 5	6.9	ND		
trans 1,2-Dichloroethene	9.8	ND< 5	2.5	ND		
1,2-Dichloropropane .	ND< 1	ND< 5	ND< 1	ND		
cis 1,3-Dichloropropene	ND< 1	ND< 5	ND< 1	ND		
trans 1,3-Dichloropropene	ND< 1	ND< 5	ND< 1	ND		
Methylene Chloride <sup>(f)</sup>	ND< 1	ND< 5	ND< 1	ND		
1,1,2,2-Tetrachloroethane	ND< 1	ND< 5	ND< 1	ND		
Tetrachloroethene	ND< 1	ND< 5	ND< 1	ND		
1,1,1-Trichloroethane	ND< 1	ND< 5	ND< 1	ND< 1		
1,1,2-Trichloroethane	ND< 1	ND< 5	ND< 1	ND		
Trichloroethene	38	ND< 5	ND< 1	ND		
Trichlorofluoromethane	ND< I	ND< 5	ND< 1	ND		
Vinyl Chloride <sup>(g)</sup>	4.9	ND< 5	ND< 1	ND		
% Recovery Surrogate	120	108	119	120		
Comments	;	100	Ÿ .	140		
Comments		1 .	j,h	<u> </u>		

<sup>\*</sup> water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg and all TCLP extracts in ug/L.

Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil and sludge, ND< 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

<sup>(</sup>d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

Epigene International	Client Project	ID: 2301 E. 12th Street,	Date Sample	1: 06/13/96	
38750 Paseo Padre Pkwy, # A-11	Oakland		Date Receive	d: 06/17/96	
Fremont, CA 94536	Client Contact:	John Alt	Date Extracted: 06/17-06/21/96		
	Client P.O:		Date Analyze	d: 06/17-06/21/96	
	Volati	ile Halocarbons		4. 00/17 00/21/90	
EPA method 601 or 8010					
Lab ID	65998			<del></del>	
Client ID	MW-6				
<u>Matrix</u>	W			<u> </u>	
Compound		Concentration		······································	
Bromodichloromethane	ND< 2				
Bromoform <sup>(b)</sup>	ND< 2				
Bromomethane	ND< 2				
Carbon Tetrachloride <sup>(c)</sup>	ND< 2				
Chlorobenzene	ND< 2			<del></del>	
Chloroethane	ND< 2				
2-Chloroethyl Viny I Ether (d)	ND< 2			<del></del>	
Chloroform <sup>(e)</sup>	ND< 2				
Chloromethane	ND< 2				
Dibromochloromethane	ND< 2			·	
1,2-Dichlorobenzene	ND< 2				
1,3-Dichlorobenzene	ND< 2			·······	
1,4-Dichlorobenzene	ND< 2				
Dichlorodifluoromethane	ND< 2				
1,1-Dichloroethane	ND< 2				
1,2-Dichloroethane	ND< 2				
l,1-Dichloroethene	ND< 2				
cis 1,2-Dichloroethene	72				
trans 1,2-Dichloroethene	20				
1,2-Dichloropropane	ND< 2				
cis 1,3-Dichloropropene	ND< 2				
rans 1,3-Dichloropropene	ND< 2				
Methylene Chloride <sup>(f)</sup>	ND< 2			<del></del>	
1,1,2,2-Tetrachloroethane	ND< 2				
Tetrachloroethene	ND< 2				
,1,1-Trichloroethane	ND< 2				
,1,2-Trichloroethane	ND< 2			-	
Trichloroethene	83				
richlorofluoromethane	ND< 2		<del> </del>		
/inyl Chloride <sup>(g)</sup>	33				
% Recovery Surrogate					
Comments	113				
water and vapor samples are reported in u	g/L goil and dud				

iples are reported in ug/L, soil and sludge samples in ug/kg and all TCLP extracts in ug/L.

Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil and sludge, ND< 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

<sup>(</sup>b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hami

1	Epigene International 38750 Paseo Padre Pkwy, # A-11		Client Pro	ject ID: 2	301 E. 12th	Date Sampled: 06/13/96					
38750 Pas	eo Padre Pkwy,	# <b>A</b> -11	Oakland				Date Rece	Date Received: 06/17/96			
Fremont,	CA 94536		Client Cont	act: John A	Alt		Date Extracted: 06/19/96				
			Client P.O:		-		Date Anal	yzed: 06/2	0/96		
EPA analytic	cal methods 6010/20	0.7, 239.2 <sup>+</sup>		LUFT Me	etals *			,, <u>, , , , , , , , , , , , , , , , , ,</u>			
Lab ID	Client ID	Matrix	Extraction	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate		
65994	EW-1	w	TTLC	ND	ND	ND	ND ND	ND	106		
65995	MW-2	w	TTLC	0.023	ND	0.020	ND	0.078	104		
65996	MW-3	w	TTLC	ND	0.008	ND	ND	ND	107		
								<u> </u>			
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			:			<del>,</del>					
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Reporting L	imit unless other-	- s	TTLC	0.5 mg/kg	0.5	3.0	30	1.0			
wise stated; I	ND means not de- the reporting limit	w	TTLC	0.005 mg/L	0.005	0.005	0.05	0.05			
			STLC,TCLP	0.01 mg/L	0.05	0.2	0.05	0.05			

<sup>\*</sup> soil samples and sludge are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

<sup>&</sup>lt;sup>†</sup> Lead is analysed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

<sup>&</sup>lt;sup>o</sup> EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title

<sup>\*</sup> surrogate diluted out of range; N/A means surrogate not applicable to this analysis

<sup>&</sup>amp; reporting limit raised due matrix interference

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

Date:

06/17/96

Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	<u>-</u>
Analyte	Sample			Amount			RPD
	(#65796) 	MS	MSD	Spiked 	MS 	MSD	
TPH (gas)	0.0	106.8	105.5	100.0	106.8	105.5	1 2
Benzene	!			!	!		1.2
	0.0	10.9	11.0	10.0	109.0	110.0	0.9
Toluene	0.0	10.7	10.7	10.0	107.0	107.0	0.0
Ethyl Benzene	0.0	10.8	10.8	10.0	108.0	108.0	0.0
Xylenes	0.0	31.8	32.2	30.0	106.0	107.3	1.3
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	   N/A 	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked  $\times$  100

Date:

06/19/96

Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	
Analyte	Sample			Amount			RPD
	(#66014)	MS	MSD	Spiked 	MS 	MSD	
TPH (gas)	0.0	111.8	112.0	100.0	111.8	112.0	0.2
Benzene	0.0	11.0	9.4	10.0	110.0	94.0	15.7
Toluene	0.0	10.9	9.4	10.0	109.0	94.0	14.8
Ethyl Benzene	0.0	10.7	9.4	10.0	107.0	94.0	12.9
Xylenes	0.0	31.6	27.4	30.0	105.3	91.3	14.2
TPH (diesel)	0	138	137	150	92	91	0.7
TRPH (oil & grease)	   N/A 	N/A	N/A	N/A	   N/A 	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

Date: 06/21/96

Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	
Analyte	Sample			Amount			RPD
	(#66051)	MS 	MSD	Spiked 	MS	MSD	
TPH (gas)	0.0	115.7	117.8	100.0	115.7	117.8	1.8
Benzene	0.0	10.2	9.3	10.0	102.0	93.0	9.2
Toluene	0.0	10.1	9.3	10.0	101.0	93.0	8.2
Ethyl Benzene	0.0	9.9	9.1	10.0	99.0	91.0	8.4
Xylenes	0.0	29.4	27.2	30.0	98.0	90.7	7.8
TPH (diesel)	0	145	146	150	97	97	0.6
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

<sup>\*</sup> Rec. = (MS - Sample) / amount spiked x 100

<sup>&#</sup>x27; RPD = (MS - MSD) / (MS + MSD)  $\times$  2  $\times$  100

Date: 06/20/96

Matrix: Water

	Concent	ration	(ug/L)	.	% Reco	very	
Analyte	Sample			Amount			RPD
	(#66117) 	MS	MSD	Spiked	MS	MSD	
TPH (gas)	N/A	N/A	n/a	N/A	N/A	N/A	N/A
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethyl Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	N/A	N/A	N/A	N/A	N/A	N/A	N/A
  TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0	23700	24400	23700	100	103	2.9

<sup>%</sup> Rec. = (MS - Sample) / amount spiked x 100

### QC REPORT FOR EPA 8010/8020/EDB

Date: 06/17/96-06/19/96 Matrix: Water

	Concentration (ug/L)				% Recovery		<u></u>
Analyte	Sample			Amount			RPD
	(#65988) I	MS	MSD	Spiked	MS	MSD	
							<del></del>
1,1-DCE	0.0	10.1	11.0	10.0	101	110	8.5
Trichloroethene	0.0	8.3	9.1	10.0	83	91	9.2
EDB	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	0.0	9.1	10.1	10.0	91	101	10.4
Benzene	0.0	11.0	11.2	10.0	110	112	1.8
Toluene	0.0	9.0	10.0	10.0	90	100	10.5
Chlorobz (PID)	0.0	8.9	9.9	10.0	89	99	10.6

% Rec. = (MS - Sample) / amount spiked x 100

## QC REPORT FOR EPA 8010/8020/EDB

Date: 06/21/96

Matrix: Water

Analyte	Concentration (ug/L)				% Recovery		
	Sample  (#65988) 	MS	MSD	Amount Spiked	   MS 	MSD	RPD
1,1-DCE Trichloroethene	0.0	10.9	. 11.2	10.0	109	112	2.7
EDB	N/A	9.7 N/A	9.6 N/A	10.0 N/A	97 N/A	96 N/A	1.0 N/A
Chlorobenzene	0.0	10.8	10.6	10.0	108	106	1.9
Benzene	0.0	12.0	11.6	10.0	120	116	3.4
Toluene	0.0	10.9	10.6	10.0	109	106	2.8
Chlorobz (PID)	0.0 	10.7	10.4	10.0	107	104	2.8

% Rec. = (MS - Sample) / amount spiked x 100

#### QC REPORT FOR AA METALS

Date: 06/20/96

Matrix: Water

	Concentration (mg/L)			% Recovery			
Analyte	   Sample	MS	MSD	Amount     	MS	MSD	RPD
Total Lead Total Chromium	0.00	4.95 5.34	4.98	5.00 5.00	99 107	100 107	0.7
Total Cadmium Total Nickel Total Zinc	0.00	4.99	5.03 4.95	5.00 5.00	100 100	101 99	0.8
	0.00 	5.28	5.33	5.00 	106	107	1.0
Total Copper	N/A	N/A	N/A	N/A 	N/A	N/A	N/A
Organic Lead	N/A	N/A	N/A	   N/A 	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

### CHAIN OF CUSTODY 6597 AEI 84

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	110 2nd Avenue South, D-7	
	Pacheco, California 94553.	<u> </u>
	telephone: (510) 798-1620	FAX: (510) 798-1622
Contact:	Ed Hamilton	



Contact: John Aut

## **Epigene International**

CONSULTING GEOLOGISTS

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Sampler: JDA

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Ĺ		telep	hone: (510	J) 798	-1620	)	FAX: (5)	10) 798-1622	Pr	aleci	Nam	. 23	at ~ (=	<u> </u>			- ND / MD
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## CHAIN OF CUSTODY 6597AEI84

Laboratory:	McCampbell Analytical	
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Contact:

## **Epigene International**

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Sampler: JOA

MO

Contact:	Ed Hamilton	0/ //0-10	20	PAX: (3	10) 798-1622			Nam	•: \2?	01 € - I			et c	a kland-
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							,			Analys				
			,				H1 G250	sie+	hydiosol	18070 30	Oil W	3 <b>3</b> 9	//	
Sample I.D.	Date/Time Sampled	Matrix Desc.	No. of		Comments	18	HIG/	9/1	14/ 60°	602/100	OIN	/	//	Lab. +
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2.MW-6				VOAS	HOL	<b>\</b>	x		A				O_	<u> </u>
3. MW-6	4	1	7	liter bottle		100		À		N N				65998
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Additional Comments:													<b>.</b>	2012

06/28/96

Dear John:

#### Enclosed are:

- 1). the results of 2 samples from your # 96-008; 2301 East 12th Street, Oakland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

Epigene Interi	national		•	96-008; 230	Date Sampled: 06/18/96					
38750 Paseo P	adre Pkwy, # A-11	Street, (	Dakland			Date Rece	ived: 06/19	/96		
Fremont, CA	94536	Client C	Contact: John	Alt	Date Extracted: 06/19-06/20/96					
		Client P	'.O:		Date Anal	yzed: 06/19	9-06/20/96			
EPA methods 503	Gasoline Range									
Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate		
66049	MW-I	W	12,000,a,h	2500	72	190	130	103		
66050	MW-5	W	7400,a	94	11	32	40	111		
	,									
	· · · · · · · · · · · · · · · · · · ·									
		;			., .,					
	<del></del>									
Reporting L	imit unless other-	w	50 ug/L	0.5	0.5	0.5	0.5			
wise stated; ]	ND means not de- the reporting limit	s	1.0 mg/kg	0.005	0.005	0.005	0.005	1		

<sup>\*</sup> water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

	D: # 96-008; 2301 East 12th	Date Sampled: 06/18/96				
-11 Street, Oakland		Date Received: (	06/19/96			
Client Contact:	John Alt	Date Extracted: 06/19/96  Date Analyzed: 06/19/96				
Client P.O:						
el Range (C10-C23) Ex	tractable Hydrocarbons as	Diesel * FID(3550) or GCFID	0(3510)			
Matrix	TPH(d) <sup>+</sup>		% Recovery Surrogate			
w	8000,d,g,h		115#			
:						
			-			
her- W	50 ug/L					
limit S	1.0 mg/kg					
	Client Contact: Client P.O: Range (C10-C23) Exists or 3510; California RW6 Matrix  W  her- de-	Client Contact: John Alt Client P.O:  Range (C10-C23) Extractable Hydrocarbons as 550 or 3510; California RWQCB (SF Bay Region) method GC  Matrix TPH(d) <sup>+</sup> W 8000,d,g,h	Client Contact: John Alt  Client P.O:  Date Extracted:  Client P.O:  Date Analyzed: (Clent P.O:  Date Extracted: (Clent P.O:  Date Extracted: (Clent P.O:  Date Extracted: (Clent P.O:  Date Analyzed:			

<sup>\*</sup> water samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP and STLC extracts in mg/L

<sup>&</sup>quot; cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622

Epigene International			th Date Sampled: 06/18/96
38750 Paseo Padre Pkwy, # A-11	Street, Oaklan	d	Date Received: 06/19/96
Fremont, CA 94536	Client Contact	:: John Alt	Date Extracted: 06/19-06/20/96
	Client P.O:		Date Analyzed: 06/19-06/20/96
	Vola	tile Halocarbons	
EPA method 601 or 8010			
Lab ID	66049	66050	
Client ID	<u>MW-1</u>	MW-5	
<u>Matrix</u>	W	W	
Compound		Concentration	on
Bromodichloromethane	ND< 5	ND< 2.5	
Bromoform	ND< 5	ND< 2.5	
Bromomethane	ND< 5	ND< 2.5	
Carbon Tetrachloride	ND< 5	ND< 2.5	
Chlorobenzene	ND< 5	ND< 2.5	
<u>Chloroethane</u>	ND< 5	ND< 2.5	
2-Chloroethyl Viny I Ether <sup>(d)</sup>	ND< 5	ND< 2.5	
Chloroform (e)	ND< 5	ND< 2.5	
Chloromethane	ND< 5	ND< 2.5	
Dibromochloromethane	ND< 5	ND< 2.5	
1,2-Dichlorobenzene	ND< 5	ND< 2.5	
1,3-Dichlorobenzene	ND< 5	ND< 2.5	
1,4-Dichlorobenzene	ND< 5	ND< 2.5	
Dichlorodifluoromethane	ND< 5	ND< 2.5	
1,1-Dichloroethane	ND< 5	ND< 2.5	
1,2-Dichloroethane	ND< 5	ND< 2.5	
1,1-Dichloroethene	ND< 5	ND < 2.5	
cis 1,2-Dichloroethene	ND< 5	2.9	
trans 1,2-Dichloroethene	ND < 5	ND< 2.5	
1,2-Dichloropropane	ND< 5	<u> </u>	
cis 1,3-Dichloropropene	ND< 5	ND< 2.5 ND< 2.5	
trans 1,3-Dichloropropene	ND< 5		
Methylene Chloride <sup>(f)</sup>	ND< 5	ND< 2.5	
1,1,2,2-Tetrachloroethane		ND< 2.5	
Tetrachloroethene	ND< 5	ND< 2.5	
1,1,1-Trichloroethane	ND< 5	ND< 2.5	
	ND< 5	ND< 2.5	
1,1,2-Trichloroethane	ND< 5	ND< 2.5	
Frichland Grand A. C.	ND< 5	ND< 2.5	
Trichlorofluoromethane	ND< 5	ND< 2.5	
Vinyl Chloride <sup>(g)</sup>	ND< 5	ND< 2.5	
% Recovery Surrogate	98	98	
Comments water and vapor samples are reported in	h,j	<u>i                                      </u>	

apor samples are reported in ug/L, soil and sludge samples in ug/kg and all TCLP extracts in ug/L.

Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil and sludge, ND< 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

<sup>(</sup>d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

#### QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/19/96

Matrix: Water

'	Concentr	ation	(ug/L)		% Reco	very	
Analyte	Sample			Amount	]		RPD
	(#66024)	MS	MSD	Spiked	MS	MSD	
TPH (gas)	0.0	98.7	102.0	100.0	98.7	102.0	3.3
Benzene	0.0	9.8	10.8	10.0	98.0	108.0	9.7
Toluene	0.0	9.7	10.8	10.0	97.0	108.0	10.7
Ethyl Benzene	0.0	9.7	10.7	10.0	97.0	107.0	9.8
Xylenes	0.0	29.5	32.6	30.0	98.3	108.7	10.0
TPH (diesel)	0	152	150	150	101	100	0.7
TRPH (oil & grease)	   N/A 	N/A	N/A	N/A	N/A	N/A	N/A

<sup>\*</sup> Rec. = (MS - Sample) / amount spiked x 100

RPD =  $(MS - MSD) / (MS + MSD) \times 2 \times 100$ 

#### QC REPORT FOR EPA 8010/8020/EDB

Date:

06/19/96

Matrix: Water

	Conce	entrati	on (ug/L)		% Reco	very	
Analyte	Sample  (#65988) 	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE Trichloroethene	0.0	10.1	11.0	10.0	101	110	8.5
EDB	0.0 N/A	8.3 N/A	9.1 N/A	10.0 N/A	83 N/A	91 N/A	9.2 N/A
Chlorobenzene	0.0	9.1	10.1	10.0	91	101	10.4
Benzene Toluene	0.0	11.0 9.0	11.2 10.0	10.0   10.0	110 90	112 100	1.8 10.5
Chlorobz (PID)	0.0	8.9	9.9	10.0	89	99	10.6

<sup>\*</sup> Rec. - (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

## CHAIN OF CUSTODY 6612 AET86

Laboratory:	McCampbell Analytical	
	110 2nd Avenue South, D-7	
	Pacheco, California 94553.	
	telephone: (510) 798-1620	FAX: (510) 798-1622
Contact:	Ed Hamilton	7.73 1022



# **Epigene International**

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-II Fremont, California, 94536

Business: (510) 791-1986 FAX: (510) 791-3306

		Pacneco, Califo	rnia 945				C	ontac	t: Ju	ha N	AL	f			Sample	r: MD/JAL
	Contact:	telephone: (510 Ed Hamilton	<i>y</i> ) 798-16	20	FAX: (5	10) 798-1622	Pr	olec	t Nam	e: 21	301 E	rich	12/2	St	reet, Oa	ieland
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+	3. MW-5			4	WAS		X	X		X						
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07/05/96

Dear John:

Enclosed are:

- 1). the results of 1 samples from your 2301 East 12th Street, Oakland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

Epigene Intern	national	Client Pr	roject ID: 2301 East 12th Street,	Date Sampled: 06/20/96				
38750 Paseo Pa	adre Pkwy, # A-11	Oakland		Date Received: (	06/26/96			
Fremont, CA 9	94536	Client Co	ontact: John Alt	Date Extracted: 06/26/96  Date Analyzed: 06/26-06/27/96				
		Client P.	0:					
EPA methods mo			23) Extractable Hydrocarbons as nia RWQCB (SF Bay Region) method GC		(3510)			
Lab ID	Client ID	Matrix	$TPH(d)^{+}$		% Recovery Surrogate			
66307	MW-5	w	900,d,b	1	93			
			100010000000000000000000000000000000000					
			- Andrew - A					
		:						
	•							
Reporting L	imit unless other-	W	50 ug/L	- 10-04 TO 1				
wise stated; l	ND means not de- the reporting limit	s	1.0 mg/kg	1				

<sup>\*</sup> water samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP and STLC extracts in mg/L

<sup>&</sup>quot; cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

<sup>&</sup>lt;sup>†</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

### QC REPORT FOR HYDROCARBON ANALYSES

Date:

06/26/96-06/27/96

Matrix: Water

Analyte	Concentration Sample		(ug/L)	% Recover		very	· · · · · · · · · · · · · · · · · · ·
	(#66291)	MS	MSD	Amount   Spiked 	   MS	MSD	RPD
TPH (gas) Benzene Toluene Ethyl Benzene Xylenes	0.0 0.0 0.0 0.0	109.0 9.6 9.5 9.4 27.9	106.5 9.3 9.3 9.2	100.0 10.0 10.0 10.0 30.0	109.0 96.0 95.0 94.0 93.0	106.5 93.0 93.0 92.0 91.3	2.3 3.2 2.1 2.2
TPH (diesel)	0	152	155	150	102	103	1.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. - (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

### **CHAIN OF CUSTODY**

Date/Time Sampled

Sample I.D.

2.

3.

4.

6.

7.

8.

9.

10.

1. MW-5 6/20, noon

Laboratory:	McCampbell Analytical	
	110 2nd Avenue South, D-7	
	Pacheco, California 94553.	· · · · · · · · · · · · · · · · · · ·
	telephone: (510) 798-1620	FAX: (510) 798-1622
Contact:	Ed Hamilton	

Matrix.

water

Desc.

Container

umber

liter bit

No. of | Type



### **Epigene International**

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-!! Fremont, California, 94536 Business: (510) 791-1986 FAX: (510) 791-3306

	Contac	t: Jac	<u>ck A</u>	15			Sam	pler:	Mike D.
98-1622	Projec	t Name	: 230	1 Fa	st 1	2 <u>7/</u>	5tre	ret, l	Mike D. Pakland
	Project	по. 9	<u> </u>		[	Date:			
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